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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/224,029 | 12/31/1998 | MARIO DIMARCO | A62-25127-US | 4202 |

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EXAMINER

DINH, TUAN T

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 03/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|----------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/224,029 | DIMARCO, MARIO |
| Examiner | Art Unit | |
| Tuan T Dinh | 2827 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 January 2002.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 6-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 6-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/3/02 have been fully considered but they are not persuasive.
2. Applicant argues:
3. (1) Keeth fails to disclose a connector assembly "configured to integrate and allocate signals between said plurality of circuit integration modules".
4. (2) Keeth fails to disclose "integrating and allocating signals between said plurality of circuit integration modules vi said connector assembly".
5. (3) Martin fails to teach a connector assembly "configured to provide a direct electrical interface for integrating and allocating signals between first and second circuit boards and said avionics cabinet"
6. (4) Martin fails to teach "spacers separating said first and second circuit boards such that a gap said first and second circuit boards is formed".
7. (5) Martin fails to teach "said gaps are configured to align with ventilation holes in said avionics cabinet".
8. (6) Martin fails to teach "aligning slots on said module with guides on said avionics cabinet".
9. (7) Keeth fails to teach "securing said module to said cabinet with a screw".

Examiner disagrees.

Regarding argument (1), Keeth shows a connector assembly, which is backplane (24-figure 1) capable electrical configured to connect to a connector (36-figure 1)

of module (14). Therefore, the electrical connection between the backplane of a cabinet and the connector of the module would be integrated and allocated signals to communicate each other.

Regarding argument (2), Keeth shows the electrical connection between the backplane (24) of the cabinet and the connector (36) of the module (14). Therefore, the insertion of the module inserted into the cabinet would be made signals from the module transmitted to the backplane.

Regarding argument (3), Martin shows an electrical module (30) having first and second circuit boards (see figure 2), the module having a connector (50) direct electrical contact to a connector (46a, 46b, 46c) of a motherboard (44) (see column 5, lines 29-39). Therefore, the module (30) having first and second circuit board including the connector (50) configured to integrating and allocating signals between the module and the cabinet.

Regarding argument (4), Martin teaches a spacer (10-figure 1) separating first and second circuit boards having a gap (20a-20e) between the first and second circuit boards.

Regarding argument (5), Martin shows the gaps (20a-e) are configured to align with ventilation holes (opening 54 of a flow-through passage 58) in said avionics cabinet.

Regarding argument (6), Martin shows aligning slots (48, column 5, line 34) on said module with guides on said avionics cabinet.

Regarding argument (7), Keeth discloses a securing said module to said cabinet with a screw (jack screw-figure 1).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

KL 3/9/02 ²¹ Claims 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Keeth et al. (U. S. Patent 5,530,615).

As to claims 21 and 23, Keeth discloses a casing (2, column 5, line 47) consider as an avionics cabinet and method as shown in figure 1 comprising:

a plurality of circuit integration modules (14, column 5, line 50) for insertion into the avionics cabinet (2), wherein said circuit integration module (14) includes at least **one circuit board** (28, column 5, lines 54-55) coupled between a faceplate (32, column 5, line 56) and a connector assembly (24, column 5, line 53); and

 said connector assembly (24) is configured to integrate and allocate signals **between said plurality of circuit integration modules (14)**.

As to claims 22 and 24, Keeth discloses the cabinet and the method as shown in figure 1 wherein said connector assembly (24) is configured to integrate and allocate signals between said plurality of circuit integration modules and said avionics cabinet.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8, 11-12, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (U. S. Patent 5,424,916) in view of Keeth et al. (U. S. Patent 5,430,615).

As to claims 6 and 15, Martin discloses a circuit integration module (30, column 5, line 20) and a method as shown in figure 2 comprising:

first and second circuit boards (32, 34, column 5, lines 21-22); and
a connector assembly (50, column 5, line 37) coupled to each of said first and second circuit board (32, 34), wherein said connector assembly is configured to provide a direct electrical interface (46a-46c, column 5, line 30) for integrating and allocating signals between said first and second circuit boards (32, 34) and a avionics cabinet (42, column 5, line 28).

Martin does not show a faceplate coupled to each of said first and second circuit boards. Keeth teaches a casing (2) as shown in figure 1 having a circuit integration module (14) including a faceplate (32) coupled to the module (14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the integration module assembly and the method of

Martin to provide the faceplate coupled to the module as taught by Keeth in order to provide a handling the module to be insert into and remove from the cabinet.

As to claim 7, Martin discloses a circuit integration module (30, column 5, line 20) as shown in figures 1-2 further comprising spacers (10-figures 1-2) separating said first and second circuit boards (32, 34) such that a gap (20) between said first and second circuit boards is formed.

As to claim 8, Martin discloses the circuit integration module (30) as shown in figure 2 wherein said gap is configured to align with ventilation hole (54, column 5, line 42) in said avionics cabinet (42)

As to claims 11-12 and 16-17, Martin discloses a circuit integration module (30, column 5, line 20) and method as shown in figure 2 wherein said module (30) is further configured to be inserted and supported into slots (48, column 5, line 34) having a guide rail in said avionics cabinet.

As to claims 18-20, Keeth teaches the method of insertion a circuit integration module (14) into an avionics cabinet (2) wherein the module (14) secured to the cabinet (2) by a jack-screw (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Martin and provide the jack-screw secured the module to the cabinet as taught by Keeth in order to fastener the module retaining in the cabinet.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Keeth as applied to claims 6-8 and 11-20 above, and further in view of McKenzie (U. S. Patent 4,002,386).

Martin and Keeth disclose and satisfy all of the limitations of the claimed invention, except for a faceplate comprised a retractable handle. McKenzie shows a card cage (10) having a module (22) including a retractable handle (24, column 2, line 16) disclosed in figures 1-3.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the module of Martin and Keeth and provide the retractable handle as taught by McKenzie because the retractable handle can be used to remove the module from the cabinet.

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Keeth as applied to claims 6-8 and 11-20 above, and further in view of Tollbom (U. S. Patent 5,793,614).

Martin and Keeth disclose and satisfy all of the limitations of the claimed invention, except for first and second grooves configured to interface with first and second guide rails on a cabinet. Tollbom teaches a module having first and second

grooves (49) configured to interface with first and second guide rails (51) on a cabinet (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the module of Martin and Keeth and provide the first and second grooves as taught by Tollbom in order to easy insertion of the module into the cabinet.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Talbott can be reached on 703-305-9883. The fax phone numbers for

the organization where this application or proceeding is assigned are 703-308-3431 for regular communications and 703-308-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD
March 1, 2002

*Kimberly
Kuan
Primary Examiner*